Informal learning in virtual communities

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Abstract
This paper deals with the concept of atypical, non-formal learning in virtual communities on the Internet. We focus on some specific kinds of communities and examine how they operate, how their members interact, what values they share, what kind of knowledge they gather and their social impact. Virtual communities are then compared to real-life communities. We subsequently focus on the learning process within virtual communities. We examine what kind of information and knowledge is available in some particular virtual communities, how it is gathered, organized and spread among their members. Finally, the learning process of virtual communities is compared to that of Open Universities. Several case studies are employed.

Keywords: Virtual Communities, Internet, informal learning, multiliteracies.

1. Introduction

1.1. Defining informal learning
Learning is a natural, spontaneous and lifelong process of human nature. It is a process through which we learn new things. Even travelling or watching TV may lead to (casual) learning. Education, on the other hand, is a formal, structured, organised process with specific goals. The terms “learning” and “education” are often confused, because education is based on the learning process (Rogers, 1996).

Rogers (1996) discerns among three main sectors in education: (1) Formal education offered by elementary and high schools, colleges and universities, (2) conventionally formal education, offered by official organisations such as governmental services, training services, enterprises etc. and (3) Informal education, offered by voluntary and non-profit organisations, or even, self-education.

In this paper we are interested in studying informal, atypical learning, related to Virtual Communities (VCs). It is a process which lays between the non-formal education, defined above, and casual learning. The actual point varies from person to person (Vardamaskou & Antoniou, 2005). It is not casual learning, because it aims at a goal; and the goal has to do with the common interest of the VC members. Thus, the scenario is as follows: a user participates in a VC which deals with his /her interest(s).

1.2. The era of new media
The Internet has dramatically changed the way people get informed, interact and communicate in the 21st century. Distribution of information and knowledge is nowadays carried out more and more via the Internet (Vardamaskou & Antoniou,
2005). It is characteristic that new terms such as blogs, bots, wikies and podcasting (Ververidis, 2006), were unknown some years ago, and are still not registered in most (paper) dictionaries. Here lies the Internet advantage: it is the only medium that instantaneously follows today’s social evolutions. Not only that, but it is actually driving the evolution. In 1988 there were about 30,000 blogs available; today, there are more than 35 million (Angelopoulos, 2006) and it is estimated that every second a new blog is created (www.technorati.com). On the other hand, Philip Meyer, author of the book “Vanishing newspaper: saving journalism in the Information Age”, estimates that, with current trends, the last newspaper reader will recycle that last newspaper in April 2040 (Angelopoulos, 2006)! Some types of new media, along with representative examples, are given below (Wikipedia, 2006):

- **BBS**: The WELL, GEnie
- **Blog**: LiveJournal, Xanga, MySpace, Facebook, Blogspot, Blogger, Myciab
- **Webcomic**: UserFriendly, Penny Arcade, Sluggy Freelance
- **Habitat**: LucasFilm's Habitat, VZones
- **IM**: ICQ, Yahoo! Messenger, MSN Messenger, AIM
- **IRC/EFNet**
- **MMORPG**: Everquest, Ultima Online, World of Warcraft, Silk Road Online
- **MOO**: LambdaMOO
- **MUD/MUSH**: TinyMUD
- **P2P**: Kazaa, Morpheus, Napster, Limewire
- **USENET**
- **Wiki**: Wikipedia, WikiWikiWeb, Wetpaint, PBWiki
- **WWW**: eBay, GeoCities, Slashdot.

2. **Defining virtual communities (VCs)**

2.1 Towards a definition

Starting from the early days of Arpanet, Virtual Communities on the Internet are today well-established fora, i.e. virtual places for communicating and exchanging information. However, the term virtual community appeared in 1993 and it is attributed to the homonymous book by Howard Rheingold (Rheingold, 1993). The book discusses a variety of Information and Communication Technology (ICT) -based communication and social groups. The technologies included Usenet, Internet Relay Chat (IRC), chat rooms, electronic mailing lists and gaming communities such as Multi-User Dungeon (MUD) and its clones (e.g., MUSH and MOO).

Rheingold pointed out that belonging to such a group has some potential benefits for the personal psychological health, as well as for society in general (Wikipedia, 2006). The World Wide Web as we know it today was not so popular yet. According to Rheingold, virtual communities are formed “when people carry on public discussions long enough, with sufficient human feeling, to form webs of personal relationships” (Rheingold, 1993).

The explosive diffusion of the Internet in certain countries was also accompanied by the proliferation of virtual communities. The nature of those communities and communications is rather diverse (Wikipedia, 2006).
Today, virtual communities or online communities are used by a variety of social groups interacting via the Internet. Different virtual communities, like real communities, have different levels of interaction and participation among their members. An email distribution list with hundreds of recipients may be characterised by low interaction, if the communication which takes place is purely informational and members scarcely interact with one another. Adding comments or tags to a blog or message board may not constitute a community. On the other hand, video gaming communities achieve a high degree of interaction, when users compete against other users online. Like traditional social groups or clubs, virtual communities often divide themselves into cliques or even separate to form new communities. Also, membership turnover rate varies greatly from VC to VC (Wikipedia, 2006).

Each community shares its own interests, values, jargon (Ververidis, 2006), titles, leaders, ways of communicating and exchanging information and knowledge.

2.2. Comparison of VCs to real communities
There is of course no substitute to interpersonal communication, but it may be limited by distance. On the other hand, in VCs the distance factor is not applicable. The ability to interact with likeminded individuals instantaneously from anywhere on the globe has considerable benefits. Perhaps the greatest advantage is that the common interests are guaranteed in VCs, whereas this is not the case in real companies based on proximity.

The use of multimedia technologies greatly facilitates long-distance communication today. Evolution of technology will eventually bring multimedia (image, video etc) dimensions in digital communication, a fact which will enrich it further. Of course, the participation in a VC presupposes some familiarisation with ICT and the relevant equipment (PC, Internet connection etc).

In real–life friendships, age is often a critical factor. Usually, one’s friends are around the same age. Generation gap constitutes a strong unwritten law in many societies. Yet, in virtual communities there is no age barrier. This is very important in many countries – including Greece – where the majority of Internet users are young people (Fig. 1) and higher age groups are considered minorities (VPRC, 2005).

![Figure 1 — Internet use according to age groups (x-axis) in Greece (VPRC, 2005)](image)
Since the personal characteristics of live communication are absent in VCs, user personalities are denoted by other symbols like nickname, personal information (such as email, website, blog, IRC number, Skype usernames etc), image/ personal mark/ signature, equipment related to the community interests (e.g. car, PC, cameras etc), user’s achievements related to the community interests etc. Of course, VCs should be seen as supplementary to the real communities and not as alternatives or substitutes.

2.3. Case studies
The examination of some case studies will further clarify the above.

1) Scientific union of Adult Education (of Greece, www.adulteduc.gr). The common interest here is professional. The Union organises conferences, seminars and meetings all around Greece; it also issues an online bimonthly bulletin for briefing and member communication. This also contains information on newly-edited books and scientific journals and the corresponding links on adult learning, information on instructor certification etc. Another similar example is “the Hellenic Network of Open & Distance Education”. These communities have a professional character, are a bit more formal (e.g., no nicknames), have a hierarchy (president and members). They have a continuing education as well as a self-education character.

2) Hellenic Linux club (www.hellug.gr). This club is a Greek official and non-profit association of people working with or using or positively predisposed to Linux. Its aim is the union of such individuals, the communication among them in order to tighten their privities, as well as, the further proliferation of this operating system. Means for achieving the above goals are: meetings, problem solving support, translation of documents and articles in Greek; improvement of Greek language support in Linux; development of free software; presence in meetings, conferences and exhibitions; collaboration with peer clubs with common goals; diffusion of know-how; Follow-up and intervention whenever the interests of Linux are threatened.

A similar site is: www.linux.gr. It contains news, documentation, articles, download material, links, Guidelines for various Linux distributions, guidelines for beginners, indexing and an electronic magazine.


3) www.overclockers.com: perhaps what is more admired here is the extra MHz a user can get out of his new PC, or, the exotic water cooler system one has constructed.

VCs such as the second and the third one listed above, may be characterised as hobbyist or amateur communities rather than professional. Such VCs are more free, more non-formal, more casual. They share different values than the formal ones. Nicknames are used instead of real names. A couple of examples (with pseudonyms) are: “John Smith – aka Shroomer in the Forums”, “My name is Valentino Black, a.k.a E@zyVGT™ on the net, and friends simply call me VG”. Also, former education titles are not so important; the most important virtues are: expertise, participation and voluntarism to help other users.

2.4. Impact of virtual communities – an example
Various Linux, open source and free software communities across Europe (including the aforementioned Greek Linux clubs) are currently collecting signatures to use as
political pressure against “ePatents” in the European Union (EU). In fact, this is the second phase of this story; during the first attempt, “ePatents” were voted down by a large percentage, but these days the matter is again brought back to the EU parliament. (Greek “LINUX Format” magazine, issue 5, Sept.-Oct. 2005).

3. Learning in virtual communities

3.1. Organisation of knowledge in VCs
In a formal distance learning environment the educational material is well organised:
(i) the courses are structured in a prerequisite order, from the fundamental to the most complicated. (ii) The educational material is composed of Learning Objects [LO’s] (Pantano, 2005). Many LOs form a course and many courses form a curriculum. Among the various courses there is no (or minimal) overlap. (iii) The educational material is usually managed by a Learning Management System (LMS) (Pantano, 2005, Dimauro et al., 2006).

Let us assume that the information / knowledge resources of a VC are the contents of its node (such as website or a blog). In this case, the material is rather chaotically organised, with high overlaps, no particular structure, no particular management. Homepages link to several sub-pages and other related nodes. The various similar VC nodes (e.g., Linux communities) are loosely connected (see Fig. 2). The ability to find specific information requires sometimes specific skills of searching and data mining. However, there is still a hidden hierarchy: the first level is the knowledge present in the node, which may be downloaded; the second level is the knowledge and experience of the community members, which is not seen.

![Figure 2 – Knowledge in VCs is built around nodes loosely connected](image)

3.2. How to retrieve information from VCs
The most common ways for getting access to specific information from VCs are:
1) Download articles from their nodes
2) Participate in fora and pose questions
3) Read FAQs and search for keywords
4) Use the site search engine (if available)
5) Contact sage membres (“gurus”, “akas” etc.) directly.
3.3. Comparison to Open University (OU) practices
There exist strong similarities but also differences between the ways learning is achieved on line in virtual communities and Open Universities (OU) using the Web. As an example of an open university we shall consider the Hellenic Open University (HOU). HOU students interact with their instructor as well as with each other over the Internet frequently, in order to ask questions and get answers about the educational material and particularly the assignments they have to carry out. Mostly the interaction is done by emails and fora. The students are all provided with the same books and are supposed to follow a specific syllabus. The students meet regularly 5 times throughout the course of a year; attendance is not required. In the end of the academic year they also take an exam (live) which is mandatory and counts for 70% of the final grade. All these practices do not occur in VCs, where learning is atypical and informal. But there is a strong similarity in that the students study and learn on their own. This practice is fundamental for the institution and operation of all OUs worldwide (Vergidis et al., 1998). Similarities between OUs and VCs are listed in Table 1 below. Table 2 lists some differences.

<table>
<thead>
<tr>
<th>Table 1 – Similarities between OUs and VCs</th>
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<tbody>
<tr>
<td>Students / members study on their own</td>
</tr>
<tr>
<td>They help each other gain specific knowledge or skills</td>
</tr>
<tr>
<td>They may be assessed by knowledge or skills (titles or grades or expertise)</td>
</tr>
<tr>
<td>They may be anywhere in the world</td>
</tr>
<tr>
<td>They are moderated by an instructor or list moderator or owner of the site.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 2 – Differences between OUs and VCs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Universities</td>
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<tr>
<td>Students are all provided with the same educational material and are supposed to follow a specific syllabus</td>
</tr>
<tr>
<td>Members study different material and practice a lot</td>
</tr>
<tr>
<td>Students have seen each other at least once</td>
</tr>
<tr>
<td>Real life interaction may never take place</td>
</tr>
<tr>
<td>Focus primarily on knowledge</td>
</tr>
<tr>
<td>Focus primarily on expertise</td>
</tr>
<tr>
<td>Provide a title</td>
</tr>
<tr>
<td>Do not provide a title</td>
</tr>
<tr>
<td>Knowledge is more theoretical</td>
</tr>
<tr>
<td>Knowledge is more practical and empirical</td>
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</tbody>
</table>

3.4. Continuing education needs
Social changes and the evolution of human knowledge in the digital era are so fast, that make further education and training a necessity for many professionals. Many profit and non-profit organisations offer (often for free) seminars via the Web (sometimes called “Webinars”) to their customers or community members. “Mathworks Inc.” offers monthlyinars concerning the use of MATLAB toolboxes. The same holds true for National Semiconductor (www.national.com). Microsoft maintains a large “knowledge base” with articles for computer professionals. Teacher unions and communities do not lag behind. For instance, in Greece there is “EEEP”, the Scientific Union of Greek primary school teachers for the spread of ICT in education, a
non-profit open community. They issue a journal, organize conferences and maintain a vivacious site (eeep.gr).

The ability of non-formal self-education and training is a vital skill for today’s professionals. The user groups of these professional sites may be regarded as loose professional communities with no or limited interaction amongst users.

3.5. VCs and "multiliteracies"
In a pioneer as well as important article published in 1996, the “New London Group” argues that today’s world is characterised by an increasing cultural and linguistic diversity and a variety of new communication ways and channels, due to the evolution of ICT.

According to the authors, traditional language-based pedagogical approaches do not provide adequate skills for working and living in general in today’s multi-cultural societies, and that, a new approach to literacy pedagogy, which they have called “multiliteracies”, is needed instead. Multiliteracies are based on the assumption that the multiple linguistic and cultural differences in our society is essential to the working and private lives of students. The use of multiliteracies approaches to pedagogy will enable students to achieve the following two goals: a) create access to the evolving language of work and community; and b) foster the critical engagement necessary for them to design their social futures and succeed through satisfying employment (The New London Group, 1996).

4. Discussion and conclusion
In this paper we have dealt with three types of Virtual Communities (VCs): video game VCs, professional VCs and amateur VCs. We have identified some differences among them, as well as, some similarities and differences between VCs and real-life communities. Next we have examined atypical informal learning in VCs and we have compared the organisation of knowledge in VCs to that of distance learning courses. Learning gained by the participation in VCs was briefly compared to the methods followed by open universities. Furthermore, it was claimed that new “digital” skills are needed by 21st-century citizens.

From the discussion above we may conclude that for a professional, participation in professional VCs may be akin to continuing education, whereas for an a non-professional, it may merely serve as entertainment. Of course, professionals may also benefit from non-professional VCs. In any case, however, free-will participation in VCs is very important, because it fosters the necessary “digital behaviour” and cultivates “digital communication” skills.

Based on personal experience, we believe that information and knowledge gathered in some community-related nodes concerning practical subjects, is superior to that available in traditional, even academic, sources such as books, electronic or conventional.

Nowadays, where a multiliteracy education is needed for living and working in the digital era, digital communication skills are necessary. “Digital behaviour” and “digital communication” rules and ethics are developed; therefore, all contemporary people should be “digitally literate”, in order to be able to survive in a changing and competitive environment. Real communication skills are not enough; “digital
“communication” skills are also needed. The ability to use the Internet and the new media is vital for surviving in the 21st century.

VCs will continue to play an important role in 21st-century society, due to social evolution, the globalisation of economy and knowledge, competition and new media technologies.

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